

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-14. (Cancelled)

15. (Currently Amended) A cultured tissue construct having at least two layers, comprising:

(a) a first layer of cultured fibroblasts cells ~~cultured under conditions to which~~ produce a layer of extracellular matrix which is synthesized and assembled by the cultured fibroblast cells, with the cultured fibroblast cells contained within the synthesized extracellular matrix layer, wherein the extracellular matrix comprises:

(i) fibrillar collagen showing a packing organization of fibrils and fibril bundles exhibiting a quarter-staggered 67 nm banding pattern;

(ii) decorin; and,

(iii) glycosaminoglycans;

wherein said extracellular matrix is produced by the cultured fibroblast cells in the absence of exogenous matrix components ~~or synthetic members~~ during the culturing conditions;

(b) a second layer of cells comprising epithelial cells disposed on the first layer; and,

(c) a third layer of cells disposed on the second layer of epithelial cells.

16. (Currently Amended) A cultured skin construct having at least two layers, comprising:

(a) a first layer of cultured dermal fibroblasts cells ~~cultured under conditions to which~~ produce a layer of extracellular matrix which is synthesized and assembled by the cultured fibroblast cells, with the cultured fibroblast cells contained within the synthesized extracellular matrix layer, wherein the extracellular matrix comprises:

(i) type I and type III collagen showing a packing organization of fibrils and fibril bundles exhibiting a quarter-staggered 67 nm banding pattern;

(ii) decorin;

(iii) fibronectin,

- (iv) tenascin; and,
- (v) glycosaminoglycans;

wherein said extracellular matrix is produced by the cultured dermal fibroblast cells in the absence of exogenous matrix components ~~or synthetic members~~ during the culturing conditions; and,

(b) a second layer of keratinocyte cells disposed on the first layer to form an epidermal cell layer, wherein the epidermal cell layer is a multilayered, stratified, differentiated and exhibits a basal layer, suprabasal layer, a granular layer and a stratum corneum;

and wherein the bilayered cultured skin construct has a basement membrane present at the junction of the first and second layers.

17. (Previously Presented) The construct of any of claims 15 and 16, wherein the cultured fibroblast cells are genetically modified to produce extracellular matrix components.

18. (Original) The construct of claim 17, wherein the cultured fibroblast cells are genetically modified to produce a growth factor, hormone, peptide, or protein.

19. – 27. (Cancelled)

28. (Previously Presented) A method for transplantation or implantation of a cultured tissue construct into a patient comprising transplanting or implanting a cultured tissue construct of any of claims 15 or 16 into a patient in need of treatment thereof.

29. (Currently Amended) A method for producing a cultured tissue construct, comprising,

(a) seeding fibroblast cells capable of synthesizing an extracellular matrix on a porous membrane in a culture vessel in a cell culture medium at about 80% to about 100% confluence;

(b) stimulating the fibroblast cells to synthesize, secrete and organize extracellular matrix components ~~under culturing conditions~~ in a second culture medium; and,

(c) continued culturing of the fibroblast cells until the cells form a layer of synthesized extracellular matrix of at least about 30 microns thick, with the cultured fibroblast

cells contained within the synthesized extracellular matrix layer, wherein the extracellular matrix comprises:

(i) fibrillar collagen showing a packing organization of fibrils and fibril bundles exhibiting a quarter-staggered 67 nm banding pattern;

(ii) tenascin; and,

(iii) glycosaminoglycans;

and wherein said extracellular matrix is produced by the cultured fibroblast cells in the absence of exogenous matrix components ~~or synthetic members~~ during the culturing conditions.

30. (Previously Presented) The construct of any of claims 15-18, wherein the construct is cohesive in having physical unitary integrity and tissue-like handling properties.